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Docket No. GJE-87
Serial No. 10/081,599In the Claims

This listing of claims will replace all prior versions and listings of claims in this application.

1 (Currently amended). An artificial chromosome ~~including a region,~~ comprising a polynucleotide sequence between C δ and C γ 3[γ] of the human IgH locus, or a functional part thereof wherein said polynucleotide sequence exerts regulatory control on immunoglobulin gene activation during lymphoid development.

2 (original). The chromosome according to claim 1, selected from the group consisting of bacterial, yeast, eukaryotic and mammalian chromosomes.

3 (Currently amended). The chromosome according to claim 1, which includes a polynucleotide sequence encoding a transcription-binding factor.

4 (original). The chromosome according to claim 1, including 1, 2, or 3 repeat sequences.

5 (withdrawn). A non-human animal capable of producing human antibodies, and which has been transformed to include a region, between C δ and C γ 3, of the human IgH locus, or a functional part thereof.

6 (withdrawn). The animal according to claim 5, selected from the group consisting of rodents, sheep, horses, pigs, goats, rabbits, chickens and bovine animals.

7 (withdrawn). The animal according to claim 5, which includes a transcription-binding factor.

8 (withdrawn). The animal according to claim 5, including 1, 2 or 3 repeat sequences.

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9 (withdrawn). A repertoire of human antibodies or heavy chains, obtained from an animal according to claim 5.

10 (withdrawn). A polynucleotide comprising at least a functional enhancer or other expression modifier present in the region, between C δ and C γ 3, of the IgH locus, and a heterologous gene under the control of the modifier.

11 (withdrawn). The polynucleotide according to claim 10, wherein the modifier comprises C δ and C γ 3.

12 (withdrawn). The polynucleotide according to claim 11, which includes a transcription-binding factor.

13 (withdrawn). The polynucleotide according to claim 11, including 1, 2, or 3 repeat sequences.

14 (withdrawn). The artificial chromosome, according to claim 1, wherein said region between C δ and C γ 3 of the human IgH locus comprises an expression modifier and wherein a heterologous gene is under the control of said expression modifier.

15 (previously presented). The artificial chromosome, according to claim 1, which comprises C δ and C γ 3.